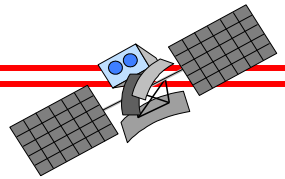
System of Systems Integration

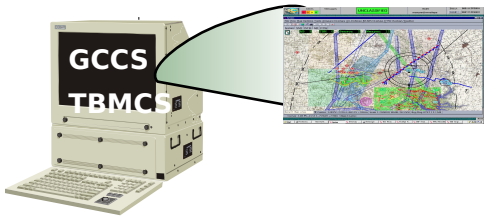
Marine Corps Systems Command
POM-06 Strategic Plan

July 2003

Three Integration Gaps



JTF HQ, JFACC, JFLCC, JFNCC



ATO

Blue Picture

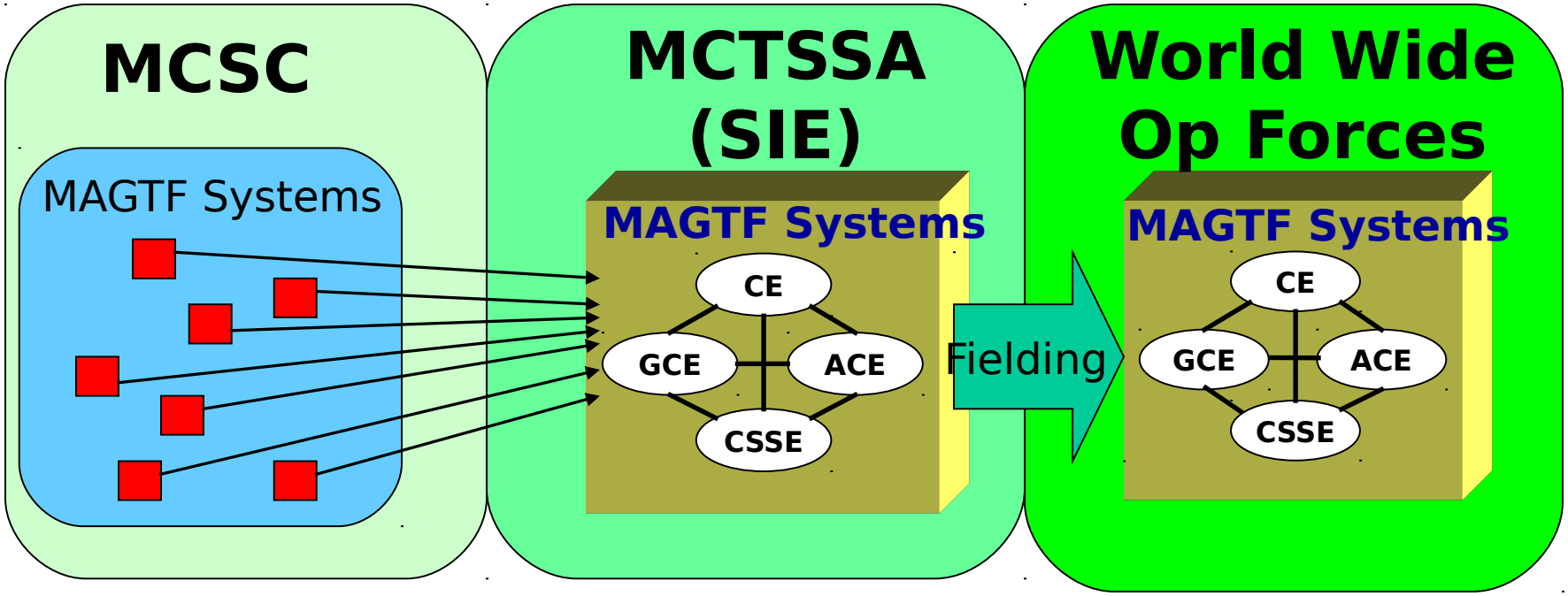
Red Picture

Fires

MEF/ DIV / WING RGT/BN/CO/Platform

- Current USMC Battle Management C2 systems provide limited cross functional integration, e.g. AFATDS does not provide active and persistent fires geometry to C2PC
- Current USMC Battle Management C2 applications can not operate from a single computer. This can be tolerated in an COC but not on a tank
- Current USMC Battle Management C2 applications have multiple, non-integrated fielding schedules and are just beginning to be tested as a System of Stems. With proper integration an improvement in one system could represent

Integration Must Occurs at Multiple Locations



Integration includes:

- **Architecture and Design - MCSC & MCTSSA & Op Forces**
- **Coding and production - MCSC & Contractor**
- **Verification and Validation - MCTSSA**
- **Technical Support with the Op Forces – MCSC &**

Way Ahead

- Since POM 02 MCSC has been working the system integration issue:
  - Established a C4I System Engineer and Integration Office
  - Established a System Integration Environment at MCTSSA
  - Conducted a System of Systems Integration Test Nov 02 – Apr 03
  - First System of Systems Baseline Fielding scheduled for Fall 03
  - MCTSSA Technical Support to the Operating Forces (TSOF) and PM provided Technical Representatives were widely used in OIF
- What we've learned and what needs to be done:
  - System of Systems Integration is very hard. Each Test "**Thread**" can involve several war-fighting functions, cross multiple echelons (including Joint), touch dozens of actors (personnel), and sometimes involve hundreds of automated and manual **Information Exchanges**
  - There are not enough resources in existing Core budgets of MCSC or MCTSSA to adequately perform these functions
  - An Above Core initiative is being prepared for POM 06